



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/591,693

07/13/2007

Roland Ringstrom

1027651-000532

2954

21839

7590

03/05/2010

BUCHANAN, INGERSOLL & ROONEY PC  
POST OFFICE BOX 1404  
ALEXANDRIA, VA 22313-1404

EXAMINER

TEATERS, LINDSEY C

ART UNIT

PAPER NUMBER

3742

NOTIFICATION DATE

DELIVERY MODE

03/05/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com  
offserv@bipc.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/591,693	<b>Applicant(s)</b> RINGSTROM, ROLAND	
	<b>Examiner</b> LINDSEY C. TEATERS	<b>Art Unit</b> 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 11/10/2009 have been fully considered but they are not persuasive. Applicant argues on page 3 of remarks that Palm's evaporative cooling apparatus does not include a coolant conduit positioned in a portion of the first space located below the lower wall for delivering coolant to cool the condensed steam, as in independent claim 1, which, per applicant, reduces the risk that coolant will splash into the second space. The lack of teaching of a conduit for delivering coolant in the portion of the first space below the lower wall in Palm has been previously noted, but it is believed that the coolant delivery system of Palm functions equally well to that of present application. Similarly to the downward apertures from the upwardly directed conduit of present application, the nozzle 29 of Palm downwardly showers coolant upon the lower portion of the first space, thereby also limiting the risk of splashing of the coolant into the surrounding second space. The rejection of claims 1-8 stands.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3742

3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palm (US 6,513,422 B1), cited by applicant, considered as an English equivalent to SE 514,560.

Re claims 1-8:

Palm teaches an apparatus (fig 2) for evaporative cooling of a liquid product, comprising a vacuum chamber (1) possessing upper (3) and lower (4) end walls and divided (5) into a first space (7, 19) centrally positioned with respect to the longitudinal axis of the vacuum chamber and a second space (6) which concentrically surrounds the first space and in which both the first and second spaces are open towards the upper end wall of the vacuum chamber, the first space has an outlet (14) for condensed steam and the second space has an inlet (8) for steamed product, as well as an outlet (10) for the product, a circulation circuit (col. 3, lines 25-29), wherein the first space is extended downwards so that it extends at least as long below the lower end wall of the vacuum chamber as the extent of the first space inside the vacuum chamber, and a coolant conduit (24, 29) positioned in a portion of the first space for delivering coolant to cool the condensed steam, wherein the first space has an upper part (7) positioned inside the vacuum chamber and a lower part (19) located beneath the lower end wall of the vacuum chamber, the inlet for product is tangentially disposed in a side wall of the vacuum chamber and is formed as a vertical gap (9), the circulation circuit for coolant discharges with a conduit in an upper region of a lower part of the first space (fig 2, discharges in a lower position of the first space relative to the top), the outlet for condensed steam is a spillway overflow (col. 2, line 67 - col. 3, line 1), the conduit is provided with a number

Art Unit: 3742

of downwardly directed apertures (see 29), the circulation circuit for coolant liquid includes an outlet, conduits, a centrifugal pump, as well as a cooler (col. 3, lines 25-29), and the ingress and egress of the coolant is at a lower portion of the first space (fig 2).

Palm discloses the claimed invention except that the coolant conduit is positioned in a portion of the first space located below the lower end wall. It would have been obvious to one of ordinary skill in the art at the time of invention to position the coolant delivery conduit, taught by Palm, in the lower portion of the first space since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70. The position of the coolant delivery conduit of Palm functions equally to that of present application as both shower down coolant from a higher position to minimize the risk of splashing the coolant into the surrounding second space.

### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

Art Unit: 3742

advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINDSEY C. TEATERS whose telephone number is 571-270-5913. The examiner can normally be reached on Mon-Thur 8:30am-6:00pm :: alternating Fri 8:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LINDSEY C TEATERS/  
Examiner, Art Unit 3742

02/19/2010

/TU B HOANG/

Supervisory Patent Examiner, Art Unit 3742

